

Work Order ID 51346

August 19, 2009 12:45:26 PM



Page 1

Item ID: D412-742-043

Accept



Setup Start



Revision ID: H

Stop



Item Name: Replacement Float Skidtube

Start Date: 08/19/2009 Start Qty: 1.00



Cust Item ID:

Required Date: 08/26/2009 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: MF Date: 09-08-19 Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D3391	Rev H								

100

0.00



DC

DOCUMENT CONTROL

Memo

0.00

Document Control

If D412-742-043 is a W/O on it's own,
Photocopy bluefile and create labels per PPP D412-742-043 CHG004

N/A

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Page 2

Item ID: D412-742-043

Accept



Setup Start



Revision ID: H

Stop



Item Name: Replacement Float Skidtube

Start Date: 08/19/2009 Start Qty: 1.00



Cust Item ID:

Required Date: 08/26/2009 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

110

0.00



HandFinish

HandFinishing

Memo

0.00

Hand Finishing

*****Do not apply LPS, see QC for more info*****

1-Spray inside tube of D3391-021/-023/-025 with LPS-3 as per Dwg D3391

A/R LPS-3 ☐ 1/1A

2-Install tubes together and seal them all the way around using Sikaflex 241/291. Ensure tube ends line-up with saddle holes for proper alignment. using 7/16" "T" Pins.

A/R ☐ Sikaflex-241/-291 ☐ M112391

Expiry date: ☐ 10/20

3-Install wearplates as per Dwg D3391. Ensure that plastic washers are against wearplate, then topped with the SS washer. Coat bolts with LPS "procyon". Seal all bolts with sikaflex except ones with inserts on inside of tube, hand tighten only bolts with no sikaflex.

A/R ☐ LPS Procyon ☐ M104251

A/R ☐ Sikaflex-241/-291 ☐ M112391

Expiry date: ☐ 10/20

4-Remove "T" pins once sikaflex is dry.

5-Coat all exposed hardware with LPS Procyon. Remove any excess off with MEK degreaser.

(X) p 281 09.08.20

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Page 3

Item ID: D412-742-043

Accept

Revision ID: H

Item Name: Replacement Float Skidtube

Start Date: 08/19/2009 Start Qty: 1.00

Required Date: 08/26/2009 Req'd Qty: 1.00

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start

Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	----------------	--------------	--------------	---------------	---------------	------------------	----------------

120

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

130

Packaging

0.00



Packaging

Memo

0.00

Packaging

Identify and pack for shipping as per PPP D412-742-043

Location: _____

PPP Rev: _____

PPP 51413

140

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

09/08/2009

B1

09-8-25

Picklist Print

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Page 1

Work Order ID: 51346

Parent Item: D412-742-043RevH

Parent Item Name: Replacement Float Skidtube


Start Date: 08/19/2009

Required Date: 08/26/2009

Comments:

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
AN3C4A  BOLT		Purchased	No			110	Each	1,066.000	24.0000			

Warehouse
Location

Loc Qty

Loc Code

Main Warehouse

ST

1066

112082

40

112314

1026

24 11 09-08-20

AN3C6A  BOLT		Purchased	No			110	Each	1,072.000	12.0000			
--	--	-----------	----	--	--	-----	------	-----------	---------	--	--	--

Warehouse
Location

Loc Qty

Loc Code

Main Warehouse

ST

1072

110372

96

111982

976

12 11 09-08-20

AN3C7A  BOLT		Purchased	No			110	Each	313.0000	8.0000			
--	--	-----------	----	--	--	-----	------	----------	--------	--	--	--

Warehouse
Location

Loc Qty

Loc Code

Main Warehouse

ST

313

105906

21

107376

292

8 11 09-08-20

Picklist Print

Page 2

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Work Order ID: 51346

Parent Item: D412-742-043RevH

Parent Item Name: Replacement Float Skidtube


Comments:

Start Date: 08/19/2009

Required Date: 08/26/2009

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
AN960C10L  washer		Purchased	No			110	Each	3,596.000	44.0000			

Warehouse
Location
OFFSHORE

FG 100

103585 100

Main Warehouse

ST 3496

112116 3496

D3391-021RevH Manufactured No



Fwd Tube Assembly

D3391-023RevH Manufactured No



Mid Tube Assembly

Warehouse
Location
Main Warehouse

ST 1

40522 1

B48 085

44 JH 09-08-20

1 JH 08-8-20

x1 JH 09-08-20

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Page 2

Picklist Print

Page 3

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Work Order ID: 51346



Parent Item: D412-742-043RevH



Parent Item Name: Replacement Float Skidtube

Start Date: 08/19/2009

Required Date: 08/26/2009

Comments:

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D3391-025RevH		Manufactured	No			110	Each	1.0000	1.0000			

Aft Tube Assembly

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST 1348120

1

1 41 09-08-20

39129

1

D3564-1RevD

Manufactured

No

110

Each

10.0000

1.0000



Wearshoe

Warehouse Loc Qty Loc Code

Location

OFFSHORE

FG

2

33798

2

Main Warehouse

ST

8

47531

1

48163

7

1 41 09-08-20

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Page 4

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Work Order ID: 51346



Parent Item: D412-742-043RevH



Parent Item Name: Replacement Float Skidtube

Start Date: 08/19/2009

Required Date: 08/26/2009

Comments:

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D3564-3RevD		Manufactured	No			110	Each	25.0000	1.0000			

Wearshoe

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
OFFSHORE		
FG	2	
33764	2	
Main Warehouse		
FP	11	
50113	11	
Main Warehouse		
ST	12	
46445	1	
46652	6	
50364	5	

1 09-08-20

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Shop Packet Print

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Picklist Print

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Work Order ID: 51346

Parent Item: D412-742-043RevH

Parent Item Name: Replacement Float Skidtube



Start Date: 08/19/2009

Required Date: 08/26/2009

Comments:

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D3564-5RevD		Manufactured	No			110	Each	6.0000	1.0000			
												
Wearshoe												

Warehouse Loc Qty Loc Code
Location

OFFSHORE

FG

2

B51257

1

41 09-08-20

34806

2

Main Warehouse

FP19

2

48555

2

Main Warehouse

ST

2

45824

1

47433

1

D3566-1RevC

Manufactured

No

110

Each

46.0000

2.0000



Gasket

Warehouse Loc Qty Loc Code
Location

Main Warehouse

ST

46

46349

1

47434

2

48557

3

51218

7

51259

33

2

41 09-08-20

Picklist Print

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Work Order ID: 51346



Parent Item: D412-742-043RevH



Parent Item Name: Replacement Float Skidtube

Start Date: 08/19/2009

Required Date: 08/26/2009

Comments:

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D3566-5RevC		Manufactured	No			110	Each	4.0000	1.0000			

Gasket

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

4

13512600

1

slf 09.08.20

36113

1

46186

1

47318

1

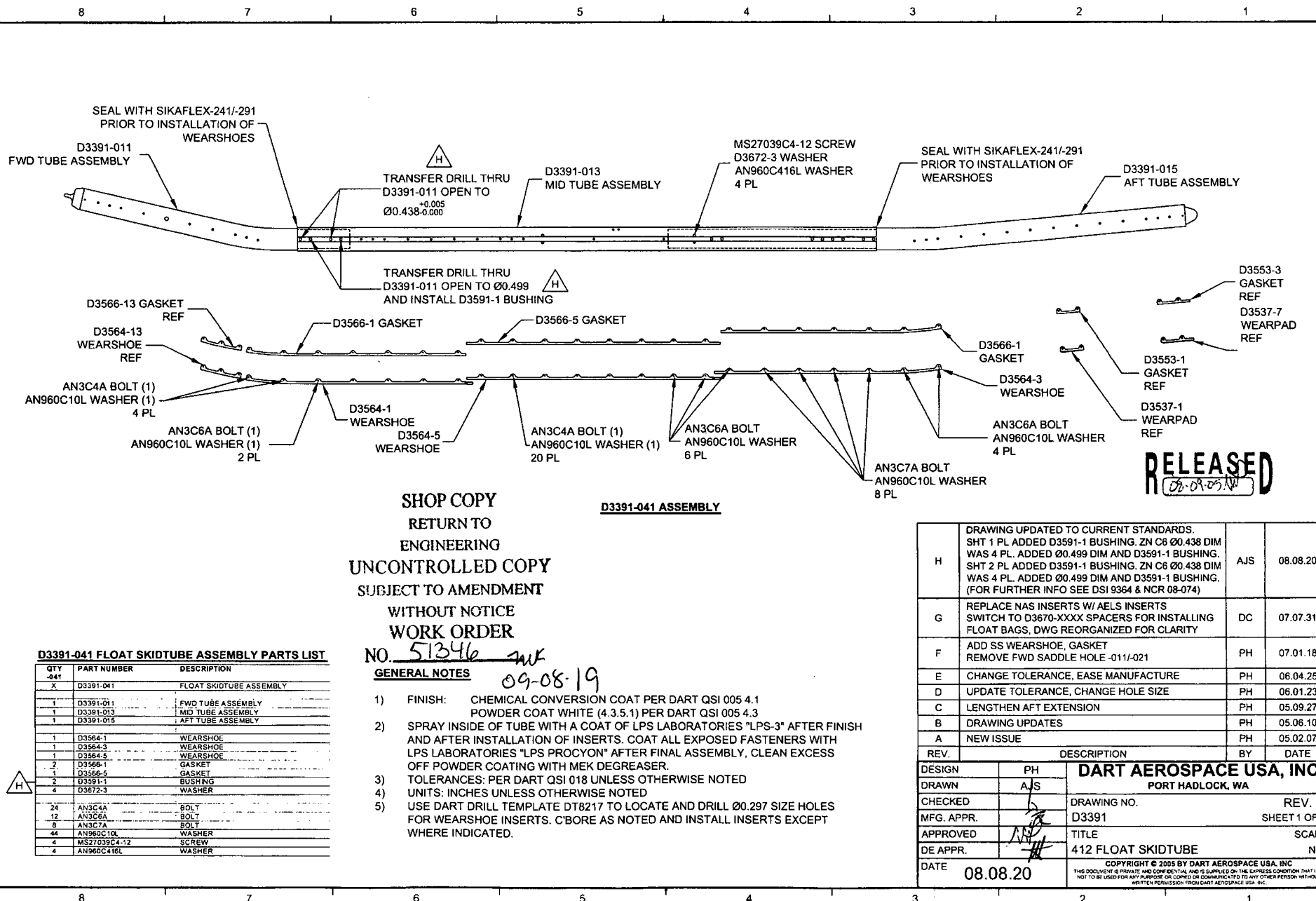
48167

1

August 19, 2009 12:45:25 PM

Shop Packet Print

Page 6



SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER

NO. 51346 *mk*

GENERAL NOTES

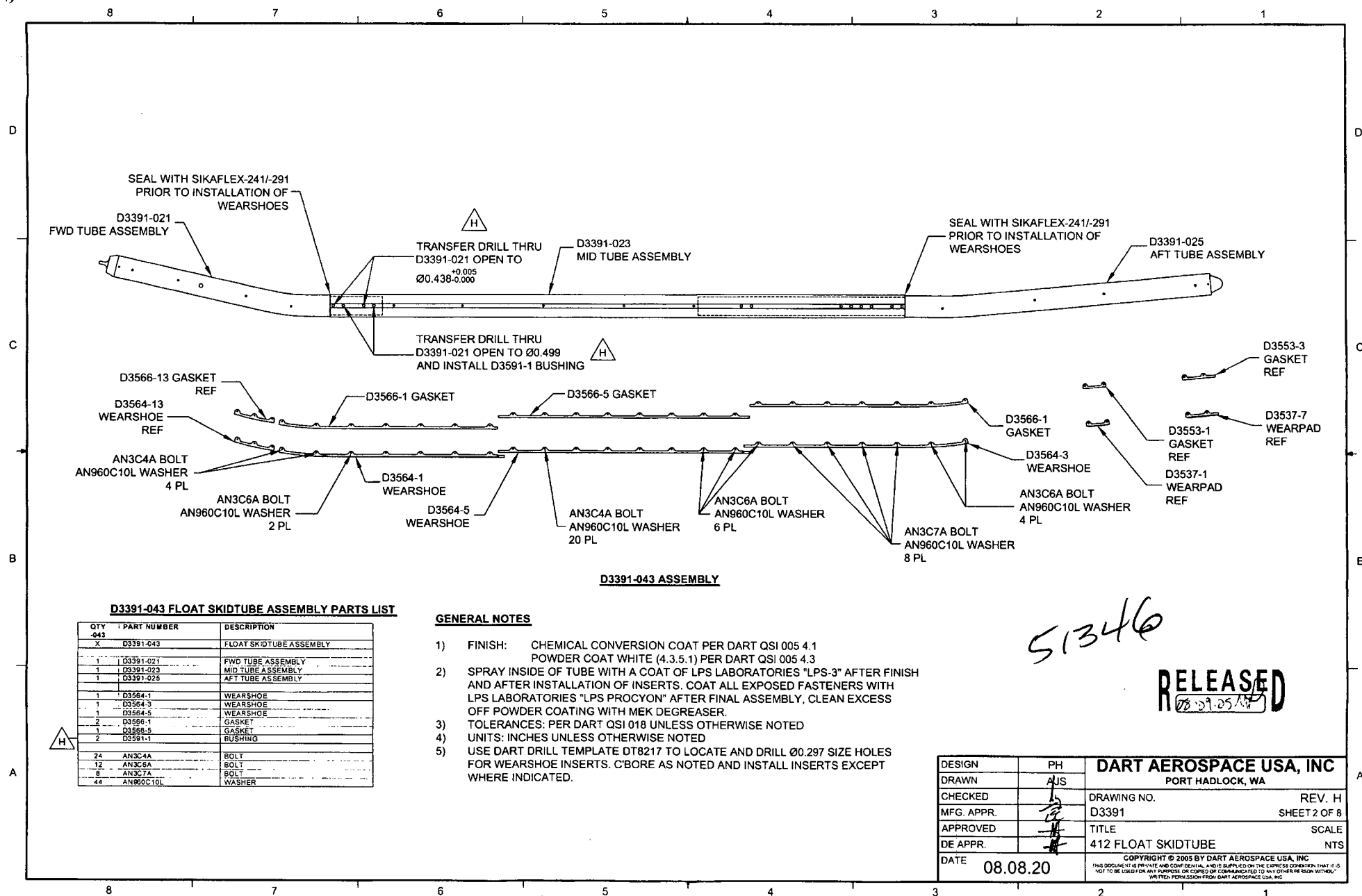
09-08-19

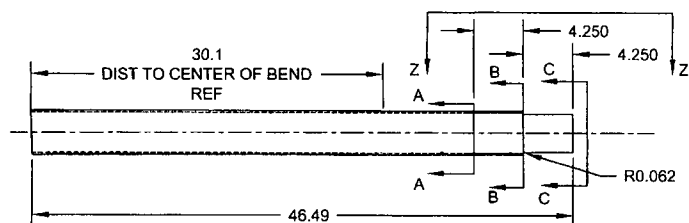
- 1) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
- 2) SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH
AND AFTER INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH
LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY. CLEAN EXCESS
OFF POWDER COATING WITH MEK DEGREASER.
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) USE DART DRILL TEMPLATE DT8217 TO LOCATE AND DRILL 0.297 SIZE HOLES
FOR WEARSHOE INSERTS. C'BORE AS NOTED AND INSTALL INSERTS EXCEPT
WHERE INDICATED.

D3391-041 FLOAT SKIDTUBE ASSEMBLY PARTS LIST

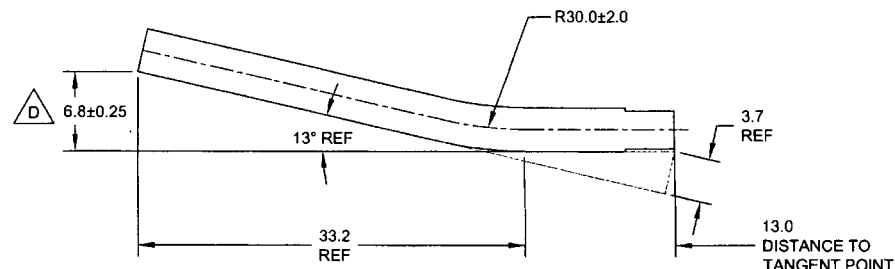
QTY	PART NUMBER	DESCRIPTION
X	D3391-041	FLOAT SKIDTUBE ASSEMBLY
1	D3391-011	FWD TUBE ASSEMBLY
1	D3391-013	MID TUBE ASSEMBLY
1	D3391-015	AFT TUBE ASSEMBLY
1	D3564-1	WEARSHOE
1	D3564-5	WEARSHOE
1	D3564-13	WEARSHOE
2	D3566-1	GASKET
1	D3566-5	GASKET
2	D3566-13	GASKET
4	D3672-3	WASHER
24	AN3C4A	BOLT
12	AN3C6A	BOLT
8	AN3C7A	BOLT
44	AN960C10L	WASHER
4	MS27039C4-12	SCREW
4	AN960C416L	WASHER

H	DRAWING UPDATED TO CURRENT STANDARDS. SHT 1 PL ADDED D3591-1 BUSHING. ZN C6 0.438 DIM WAS 4 PL. ADDED 0.499 DIM AND D3591-1 BUSHING. SHT 2 PL ADDED D3591-1 BUSHING. ZN C6 0.438 DIM WAS 4 PL. ADDED 0.499 DIM AND D3591-1 BUSHING. (FOR FURTHER INFO SEE DSI 9364 & NCR 08-074)	AJS	08.08.20
G	REPLACE NAS INSERTS W/ AELS INSERTS SWITCH TO D3670-XXXX SPACERS FOR INSTALLING FLOAT BAGS. DWG REORGANIZED FOR CLARITY	DC	07.07.31
F	ADD SS WEARSHOE, GASKET REMOVE FWD SADDLE HOLE -011/-021	PH	07.01.18
E	CHANGE TOLERANCE, EASE MANUFACTURE	PH	06.04.25
D	UPDATE TOLERANCE, CHANGE HOLE SIZE	PH	06.01.23
C	LENGTHEN AFT EXTENSION	PH	05.09.27
B	DRAWING UPDATES	PH	05.06.10
A	NEW ISSUE	PH	05.02.07
REV.	DESCRIPTION	BY	DATE
DESIGN	PH	DART AEROSPACE USA, INC	
DRAWN	AJS	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. H
MFG. APPR.		D3391	SHEET 1 OF 8
APPROVED		TITLE	SCALE
DE APPR.		412 FLOAT SKIDTUBE	NTS
DATE	08.08.20	COPYRIGHT © 2005 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

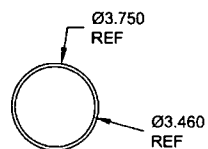




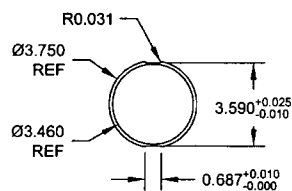
D3391-1 CUTTING DETAIL
(MAKE FROM D6013-047 SKIDTUBE MATERIAL)



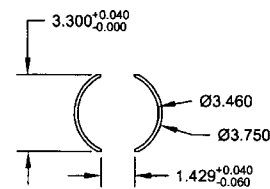
D3391-011/-021 BENDING DETAIL
(MAKE FROM D3391-1)



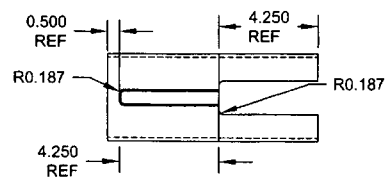
SECTION A-A
SCALE 2X



SECTION B-B
SCALE 2X







SECTION C-C
SCALE 2X

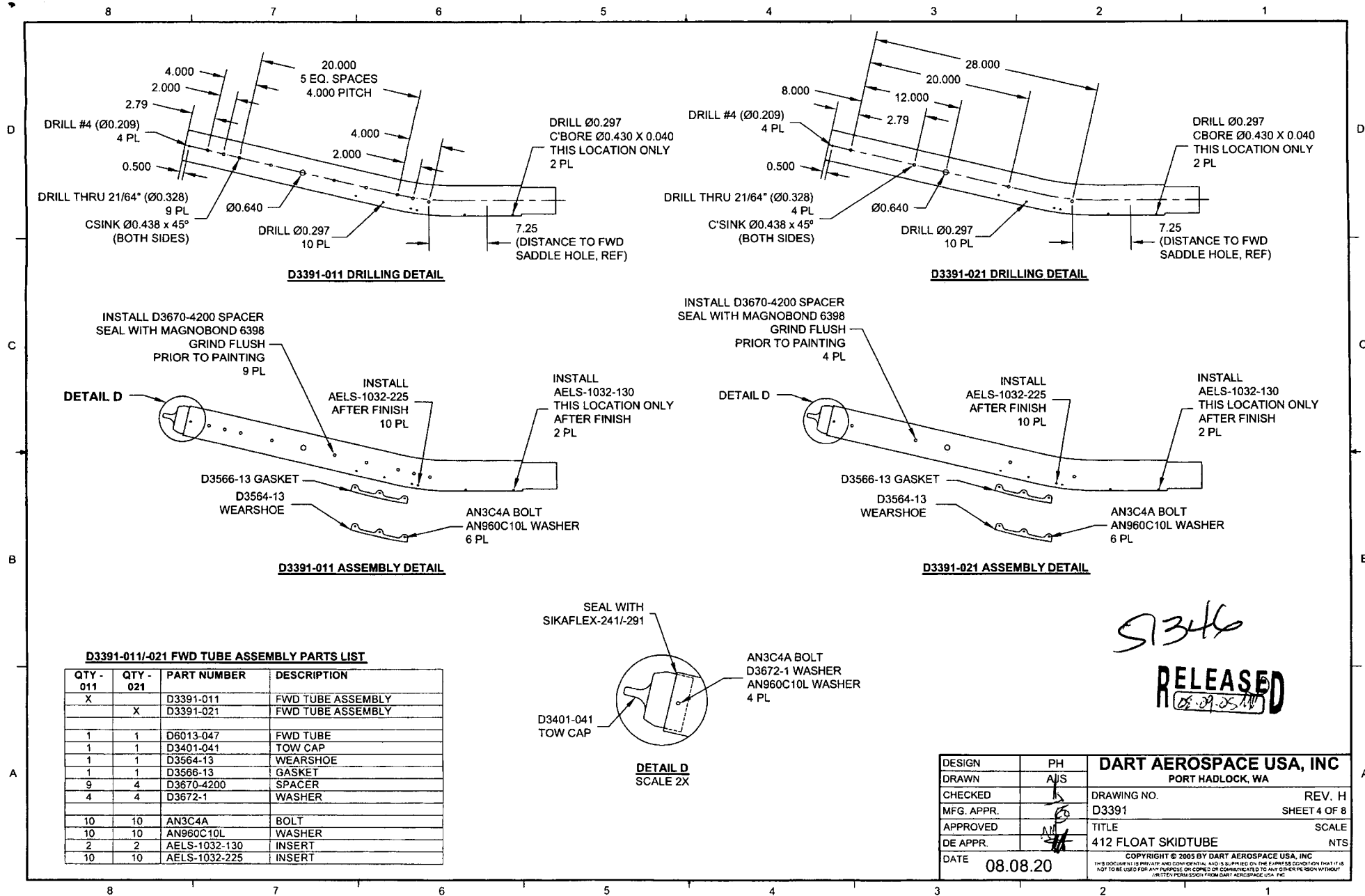


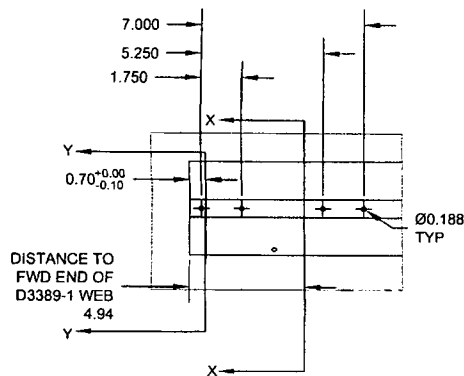
VIEW Z-Z
SCALE 2X

51348

RELEASED
08-05-10

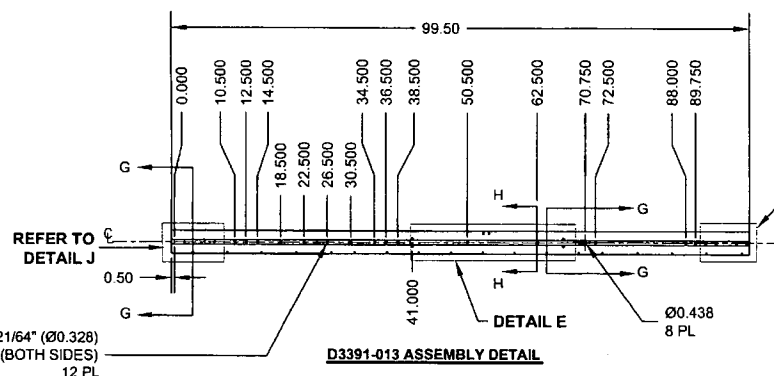
DESIGN	PH	DART AEROSPACE USA, INC	
DRAWN	AJS	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. H
MFG. APPR.		D3391	SHEET 3 OF 8
APPROVED		TITLE	SCALE
DE APPR.		412 FLOAT SKIDTUBE	NTS
DATE	08.08.20	COPYRIGHT © 2005 BY DART AEROSPACE USA, INC	
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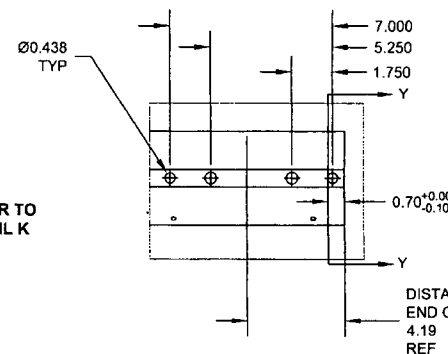
DETAIL J
SCALE 4X

DRILL THRU 21/64" (Ø0.328)
CSINK Ø0.438 X 45° (BOTH SIDES)
12 PL



D3391-013 ASSEMBLY DETAIL

REFER TO
DETAIL K

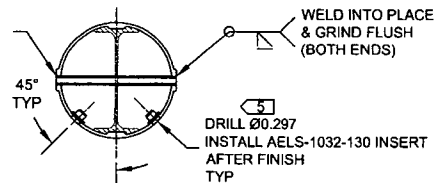


DETAIL K
SCALE 4X



SECTION G-G
SCALE 5X

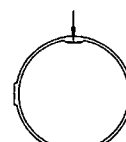
INSTALL
D3681-1 SPACER



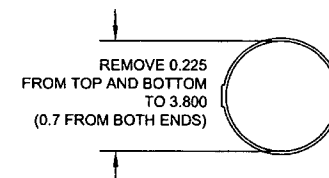
SECTION H-H
SCALE 5X

WELD INTO PLACE
& GRIND FLUSH
(BOTH ENDS)

REMOVE 0.030
FROM TOP AND BOTTOM
TO 3.610



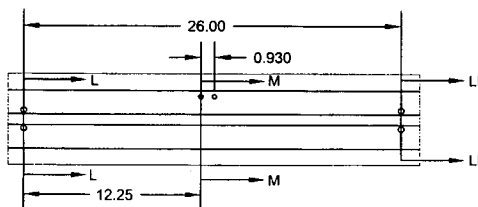
SECTION X-X
SCALE 5X



SECTION Y-Y
SCALE 5X

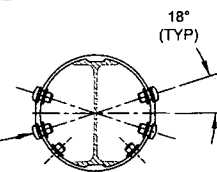
D3391-013 MID TUBE ASSEMBLY PARTS LIST

QTY -013	PART NUMBER	DESCRIPTION
X	D3391-013	MID TUBE ASSEMBLY
1	D2500-1-100	EXTRUSION
1	D3389-1	WEB
4	D3672-1	WASHER
4	D3672-3	WASHER
12	D3681-1	SPACER
24	AELS-1032-130	INSERT
4	ALS4-428-165	INSERT
4	AN960C10L	WASHER
4	AN960C416L	WASHER
4	MS27039C1-09	SCREW
4	MS27039C4-08	SCREW

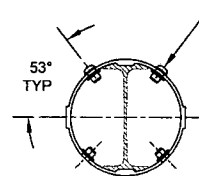


DETAIL E
SCALE NONE

DRILL Ø0.391
INSTALL ALS4-428-165 INSERT
MS27039C4-08 SCREW
D3672-3 WASHER
AN960C416L WASHER
AFTER FINISH
4 PL



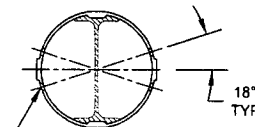
SECTION L-L
SCALE 5X



SECTION M-M
SCALE 5X

DRILL Ø0.297
INSTALL AELS-1032-130 INSERT
MS27039C1-09 SCREW
D3672-1 WASHER
AN960C10L WASHER
AFTER FINISH
4 PL

DRILL Ø0.250
4 PL



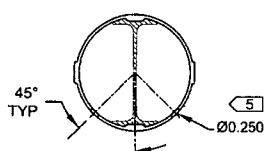
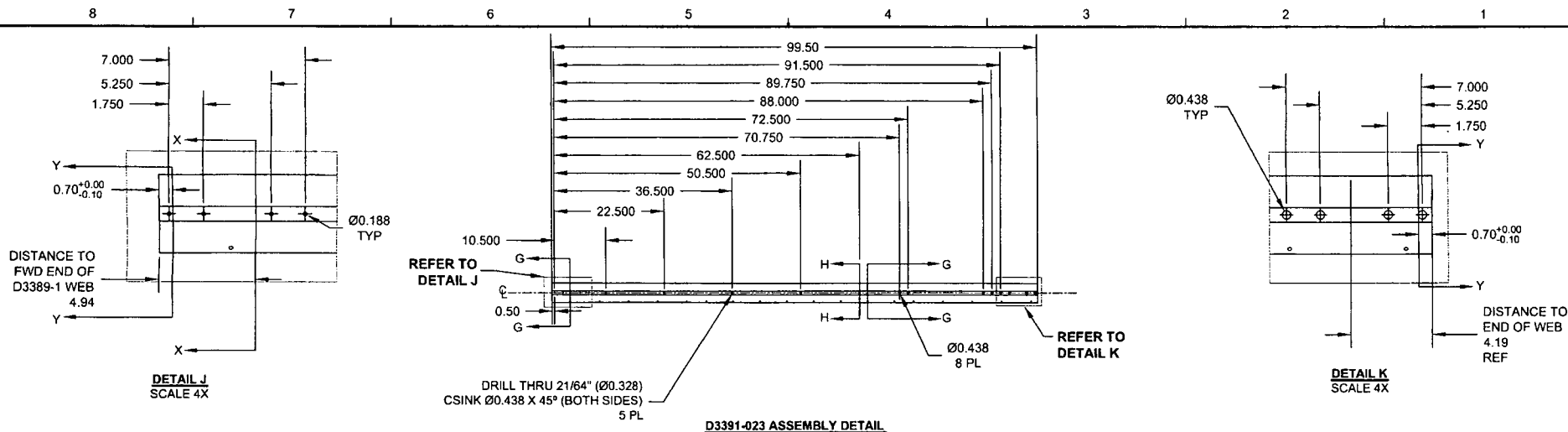
SECTION LL-LL
SCALE 5X

D3391-013 MID TUBE ASSEMBLY

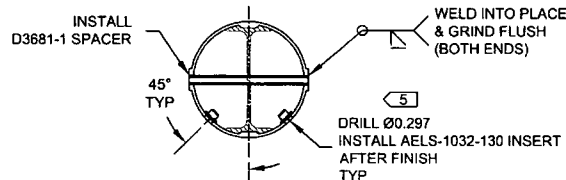
- 1) MATERIAL: MAKE FROM D2500-1-100 EXTRUSION
- 2) INSTALL D3389-1 WEB TO OUTER TUBE USING SIKAFLEX-241/-291 PER QSI 015
- 3) WELDING: PER DART QSI 004

DESIGN	PH	DART AEROSPACE USA, INC	
DRAWN	AJS	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. H
MFG. APPR.		D3391	SHEET 5 OF 8
APPROVED		TITLE	SCALE
DE APPR.		412 FLOAT SKIDTUBE	NTS
DATE	08.08.20	COPYRIGHT © 2005 BY DART AEROSPACE USA, INC THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

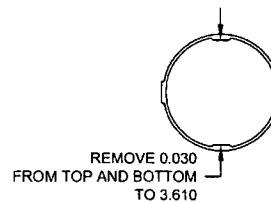
RELEASED



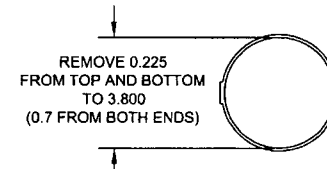
SECTION G-G
SCALE 5X



SECTION H-H
SCALE 5X



SECTION X-X
SCALE 5X



SECTION Y-Y
SCALE 5X

D3391-023 MID TUBE ASSEMBLY PARTS LIST

QTY - 023	PART NUMBER	DESCRIPTION
X	D3391-023	MID TUBE ASSEMBLY
1	D2500-1-100	EXTRUSION
1	D3389-1	WEB
5	D3681-1	SPACER
20	AELS-1032-130	INSERT

D3391-023 MID TUBE ASSEMBLY

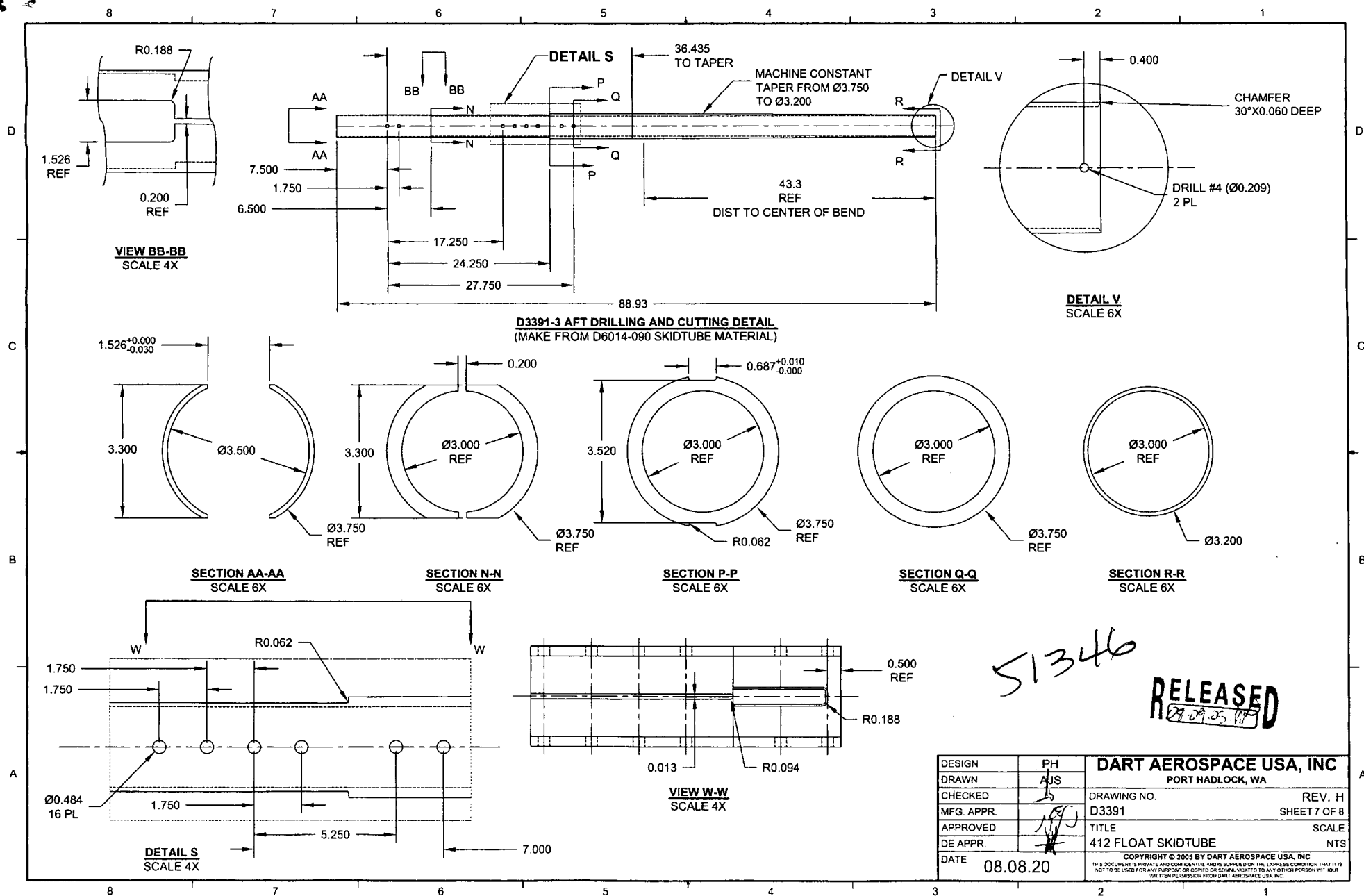
- 1) MATERIAL: MAKE FROM D2500-1-100 EXTRUSION
- 2) INSTALL D3389-1 WEB TO OUTER TUBE USING SIKAFLEX-241/-291 PER QSI 015
- 3) WELDING: PER DART QSI 004

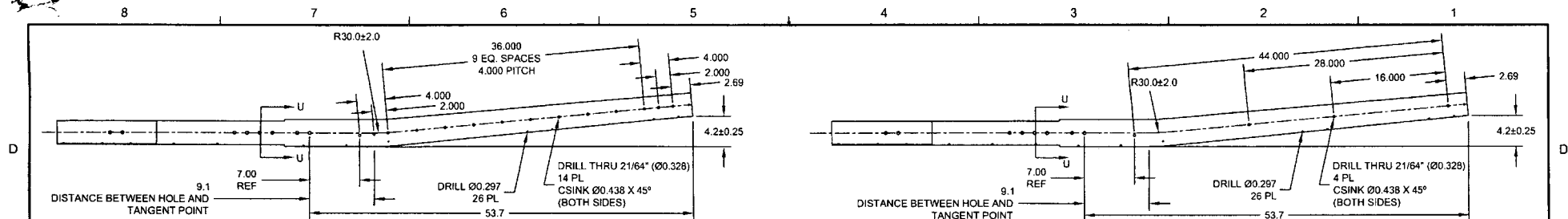
DESIGN	PH	DART AEROSPACE USA, INC	
DRAWN	AJS	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. H
MFG. APPR.		D3391	SHEET 6 OF 8
APPROVED		TITLE	SCALE
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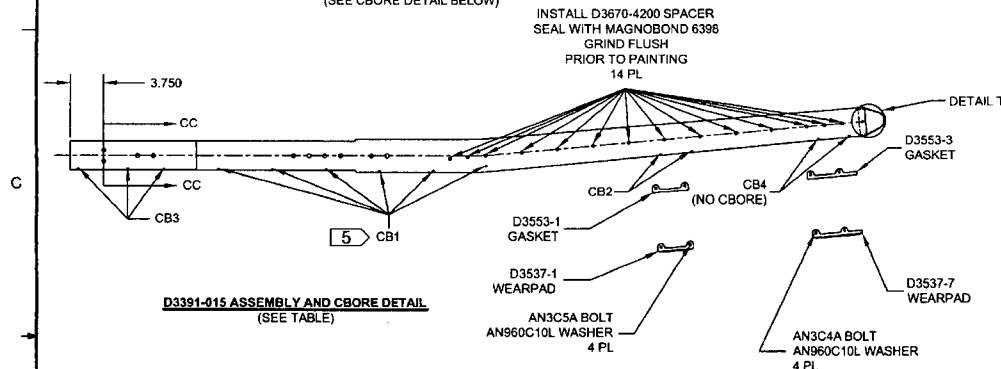
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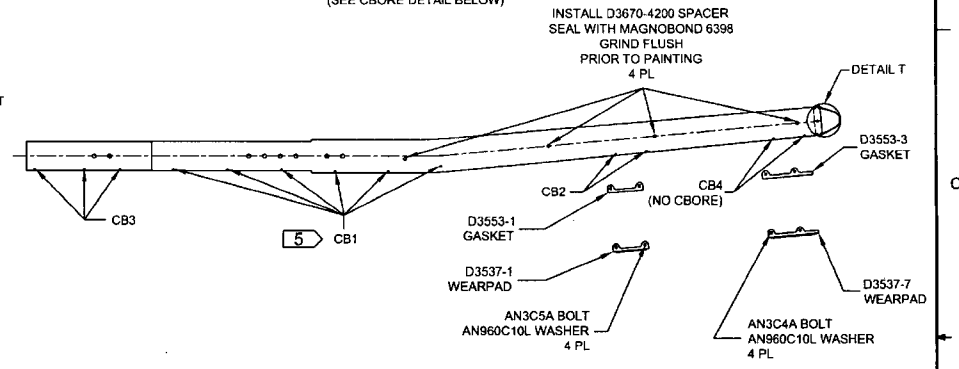


D3391-015 BENDING AND DRILLING DETAIL
(SEE CBORE DETAIL BELOW)

D3391-025 BENDING AND DRILLING DETAIL
(SEE CBORE DETAIL BELOW)



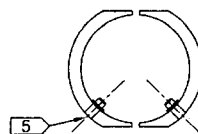
D3391-015 ASSEMBLY AND CBORE DETAIL
(SEE TABLE)



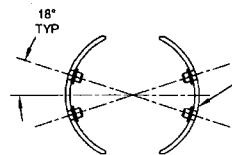
D3391-025 ASSEMBLY AND CBORE DETAIL
(SEE TABLE)

D3391-015-025 AFT TUBE ASSEMBLY PARTS LIST

QTY - 015	QTY - 025	PART NUMBER	DESCRIPTION
X	X	D3391-015	AFT TUBE ASSEMBLY
		D3391-025	AFT TUBE ASSEMBLY
1	1	D6014-090	AFT TUBE
1	1	D2646	AFT CAP
1	1	D3537-1	WEARPAD
1	1	D3537-7	WEARPAD
1	1	D3553-1	GASKET
1	1	D3553-3	GASKET
14	4	D3670-4200	SPACER
2	2	D3672-1	WASHER
14	14	AELS-1032-130	INSERT
12	12	AELS-1032-225	INSERT
4	4	ALS4-428-165	INSERT
6	6	AN3C4A	BOLT
4	4	AN3C5A	BOLT
10	10	AN960C10L	WASHER

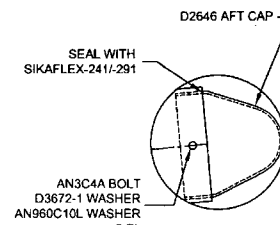


SECTION U-U
SCALE 3X



SECTION CC-CC
SCALE 3X

DRILL Ø0.391
CBORE Ø0.516 X 0.040 DEEP
INSTALL ALS4-428-165 INSERT
4 PL



DETAIL T
SCALE 4X

CBORE HOLES MARKED CB1-CB4 AS FOLLOWS AND
INSTALL AELS-1032-XXX AFTER FINISH AS NOTED

HOLES MARKED	QTY D3391-015	QTY D3391-025	CBORE	P/N
CB1	12	12	Ø0.430 X 0.170	AELS-1032-225
CB2	4	4	Ø0.430 X 0.170	AELS-1032-130
CB3	6	6	Ø0.430 X 0.040	AELS-1032-130
CB4	4	4	NONE	AELS-1032-130

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